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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/084,325

Applicant(s)

SUEMURA, YOSHIHIKO

Examiner

Justin M. Philpott

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner:  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/28/02, 5/12/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: "2 or more" (line 11) should be changed to "two or more". Appropriate correction is required.
2. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, claim 2 recites all of the nodes are second nodes, wherein claim 1, upon which claim 2 depends, recites both first and second nodes. Thus, claim 2 not only fails to further limit claim 1, but actually is broader in scope than claim 1 since claim 2 has eliminated any distinction of separate first and second nodes, and instead claims only second nodes. Correction is required.
3. Claim 3 is objected to because of the following informalities: "centralized control unit set actively said lower order path" (line 5) should be changed to "centralized control unit is set actively by said low order path". Appropriate correction is required.
4. Claim 8 is objected to because it contains either unnecessarily duplicative language, or contains language which must be distinguished from previously cited language. Specifically, the phrase "a node having a switch for switching a path ... referred to as a low order path" (lines 2-4) is repeated as "a node having a switch for switching said low order path" (line 5). If the latter reference is to the same node then the language is unnecessarily duplicative and should be

Art Unit: 2665

removed. If the second-mentioned "node" is different from the first-mentioned node, the claim must be re-written to distinguish between the two nodes.

5. Claim 8 is objected to because of the following informalities: "2 or more" (at both line 11 and line 14) should be changed to "two or more". Appropriate correction is required.

6. Claim 8 is objected to because it is unclear whether "N" at line 8 and "N" at line 17 are the same "N" at line 14. If not, a distinction must be made between the two, or three. For the purpose of the prior art rejections in this office action it is understood that the third-mentioned N is the same as the second-mentioned N, which is the same as the first-mentioned N.

7. Claim 9 is objected to because of the following informalities: "2 or more" (at both line 9 and line 17) should be changed to "two or more". Appropriate correction is required.

8. Claim 9 is objected to because it is unclear whether "N" at line 19 and "N" at lines 16 and 17 are the same "N" at line 11 and the "N" at line 8. If not, a distinction must be made between the two, or three, or four. For the purpose of the prior art rejections in this office action it is understood that the fourth-mentioned N is the same as the third-mentioned N, which is the same as the second-mentioned N, which is the same as the first-mentioned N.

9. Claim 12 is objected to because of the following informalities: "2 or more" (line 8) should be changed to "two or more". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2665

11. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said low order paths" (line 11 and line 13) when the previous language of claim 1 only provides for a *single* low order path (e.g., a single low order path at lines 5-6, and referring to the *same* single low order path at lines 7-8). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 1 recites the limitation "said high order paths" (lines 11-12 and lines 12-13) when the previous language of claim 1 only provides for a *single* high order path (e.g., at line 10). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 1 recites "said nodes" (line 14) which is believed to refer to the first node (from line 4) and the second node (from line 7), but later recites "said second nodes" (lines 15-16) when there has only been an introduction of a *single* second node. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "all said nodes are said second nodes" (line 2). However, claim 1 recites a *single* second node. Thus, reference to "said second nodes" lacks antecedent basis.

Claim 3 recites "said low order paths" (line 4) when the previous language of claim 1 only provides for a *single* low order path (e.g., a single low order path at lines 5-6, and referring to the *same* single low order path at lines 7-8). There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2665

Claim 4 recites "the low order paths" (line 3) when the previous language of claim 1 only provides for a *single* low order path (e.g., a single low order path at lines 5-6, and referring to the *same* single low order path at lines 7-8). There is insufficient antecedent basis for this limitation in the claim.

Claims 5-7 are dependent upon claim 1 and are therefore rejected for the same reasons discussed above regarding claim 1.

Claim 8 recites the limitation "said low order paths" (at each of line 9, line 11 and line 17) when the previous language of claim 8 only provides for a *single* low order path (e.g., a single low order path at lines 3-4, and referring to the *same* single low order path at line 5). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 8 recites the limitation "said high order paths" (at each of line 10, line 11 and line 16) when the previous language of claim 8 only provides for a *single* high order path (e.g., at line 8). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 8 recites "said nodes" (line 14) which is believed to refer to the first node (from line 4) and the second node (from line 7), but later recites "said second nodes" (lines 15-16) when there has only been an introduction of a *single* second node. There is insufficient antecedent basis for this limitation in the claim.

Further, claim 8 recites "these nodes" (line 13) and it is unclear what nodes are "these nodes". For example, it is unclear whether "these nodes" refers to all of first-mentioned and second-mentioned nodes, nodes only corresponding to the separated high order path and low order path, or other nodes. Correction is required.

Claim 8 is further rejected for being unclear because Examiner is unable to comprehend what the following phrase means: "in the case where N (N is an integer of 2 or more) of said low order paths having a route partly coinciding with a section connecting any two of said high order paths exist, the high order path on which the N of said low order paths are multiplexed is set in said section" (lines 14-18). Aside from the many lack of antecedent basis issues discussed above, the overall language is further unclear. For example, it is unclear what a path being "set" (line 18) means, and what "paths having a route *partly coinciding* with a *section* connecting any two of said high order paths *exist*" mean. Correction and clarification is required.

Claim 9 is rejected for the same reason discussed immediately above regarding claim 8, wherein claim 9 recites the same or similar unclear language at lines 13-20.

Further, claim 9 recites the limitation "said low order paths" (at each of line 9, line 11, line 17 and line 19) when the previous language of claim 8 only provides for a *single* low order path (e.g., a single low order path at lines 3-4, and referring to the *same* single low order path at lines 5-6). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 9 recites the limitation "said high order paths" (at each of line 10 and line 11) when the previous language of claim 8 only provides for a *single* high order path (e.g., at line 8). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 9 recites "these nodes" (line 12) and it is unclear what nodes are "these nodes". For example, it is unclear whether "these nodes" refers to all of first-mentioned and second-mentioned nodes, nodes only corresponding to the separated high order path and low order path, or other nodes. Correction is required.

Further, claim 9 recites "having any two of said first node or said second node as its starting point node and endpoint node" (lines 13-15) which is unclear. Specifically, the language is unclear because it implies there are more nodes in the system than just the "first node" introduced at line 2 and the "second node" introduced at line 5. If there are more nodes than these two nodes, the claims must be amended appropriately to indicate such additional nodes. Thus, the language "any two" is unclear. It appears the claim should be amended to more clearly recite, e.g., "having either ~~any two of~~ said first node ~~and~~ or said second node as its starting point and endpoint, respectively".

Claim 10 recites the limitations "length is L-1" and "length is L-2, L-3, ..., 2" which is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the lengths of "L-1", "L-2" and "L-3" are indefinite since it is unclear what unit "L" is, and correspondingly what would be one or more integers less than L; assuming, e.g., that "L-1" refers to the length L minus the number 1, the value of "L-1" has no clear meaning if both L and "1" are not of the same unit. Further, it is unclear what the recitation of "... , 2" means. That is, it is unclear what "2" means, e.g., whether it is twice the length of L, or a path with two hops, or a specific value of length, and if so, what unit of length it is. Correction is required.

Claim 11 recites the limitations "length is L, L-1, L-2, ..., 2", "length is L-1, L-2, L-3, ... 2", and "L-I, L-I-1, L-I-2, ... 2" which is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the lengths of "L-1", "L-2" and "L-3" are indefinite since it is unclear what unit "L" is, and correspondingly what would be one or more integers less than L; assuming, e.g., that "L-1"



Art Unit: 2665

refers to the length L minus the number 1, the value of "L-1" has no clear meaning if both L and "1" are not of the same unit. Further, it is unclear what the recitation of "..., 2" means. That is, it is unclear what "2" means, e.g., whether it is twice the length of L, or a path with two hops, or a specific value of length, and if so, what unit of length it is. Correction is required. Finally, if in claims 10 and 11 applicant intends to claim that the method of claim 9 accommodates routes in an order according to routes having the greatest or fewest number of hops, which is what Examiner believes may be the case, applicant should claim this limitation accordingly. The present language of claim 10 (lines 1-5) and claim 11 (lines 1-11) is unclear. Correction is required.

Claim 12 recites the limitation "said low order paths" (at each of line 8, line 11 and line 13) when the previous language of claim 12 only provides for a *single* low order path (e.g., a single low order path at line 3). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 12 recites the limitation "one of said high order paths" (at both lines 8-9 and line 1-) when the previous language of claim 12 only provides for a *single* high order path (e.g., at line 6). There is insufficient antecedent basis for this limitation in the claim.

Further, claim 12 recites "that node" (line 13) and it is unclear what node is "that node". There is insufficient antecedent basis for this limitation in the claim. That is, it is unclear whether "that node" is referring to the "node apparatus" recited at line 1, and if it is, then "that node" should be changed to "the node apparatus". Otherwise, other correction and clarification is required.

Finally, claims 1-12 each recite one or more of "said low order path", "said low order paths", "said high order path" and/or "said high order path", which appear to rely upon the recitation in claims 1, 8, 9 and 12 of "(hereafter, referred to as a low order path)" and "(hereafter, referred to as a high order path)". However, phrases recited in parentheses, i.e., "( ... )", are not given patentable weight. Accordingly, the phrases "(hereafter, referred to as a low order path)" and "(hereafter, referred to as a high order path)" recited in claims 1, 8, 9 and 12 are not given patentable weight, and as a result, all following references to such limitations lack antecedent basis. Thus, all of claims 1-12, by reciting one or more of "said low order path", "said low order paths", "said high order path" and/or "said high order path", lack antecedent basis. Applicant may overcome this specific rejection by removing the parentheses from claims 1, 8, 9 and 12. It is further noted that the limitation "(N is an integer of 2 or more)" in claims 1, 8, 9 and 12 is not given patentable weight for the same reasons discussed above. Accordingly, these claims are additionally rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, since the term "N" is indefinite without providing that, e.g., N is an integer or two or more. Similar to the above, applicant may overcome this specific rejection by removing the parentheses from claims 1, 8, 9 and 12.

### *Claim Rejections - 35 USC § 102*

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

Art Unit: 2665

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-3, 5-9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,975,626 by Eberle et al.

Regarding claim 1, Eberle teaches a communication network including a plurality of nodes and a plurality of link groups connecting these nodes, wherein said nodes include: a first node (e.g., at quick channel switch 460, see FIG. 4) having a switch (e.g., switch 460) for switching a path having a predetermined bandwidth referred to as a low order path (e.g., low latency/quick channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 0.66 Gbps and aggregate bandwidth of 10.56 Gbps); and a second node (e.g., at bulk channel switch 450) having a switch (e.g., bulk switch scheduler 440) for switching the low order path (e.g., at "output select signals", see col. 9, line 5 – col. 11, line 53), a switch (e.g., switch 450) for switching a path having a bandwidth larger than the predetermined bandwidth referred to as a high order path (e.g., bulk channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 2.5 Gbps and aggregate bandwidth of 40 Gbps), multiplexing means (e.g., via multiplexer, see col. 10, lines 56-60) of multiplexing N, wherein N is an integer of two or more, of low order paths (e.g., request/output select signals; see col. 9, lines 34-38) on the high order path (e.g., bulk channel), and separating means (e.g., via output selector, see FIG. 4) of separating the high order path (e.g., bulk channel) into N lower order paths (e.g., grant/output select signals; see col. 10, lines 4-8), and the low order path (e.g., low latency/quick channel) is set between any nodes (e.g., nodes 20 and 30) and the high order path (e.g., bulk channel) is set between the second node (e.g., bulk channel switch 450).

Regarding claim 2, Eberle teaches all nodes are second nodes (e.g., see nodes 420 and 430 in FIG. 4 and see col. 9, lines 23-25 regarding each node being coupled to both channel switches 450 and 460).

Regarding claim 3, Eberle teaches a centralized control unit (e.g., bulk switch scheduler 440) capable of communication with all nodes and having a path table recording route information (e.g., prescheduled targets, see col. 11, lines 25-35) on all the existing low order paths, and the centralized control unit is set actively by the low order path and the high order path (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53).

Regarding claim 5, Eberle teaches the low order path may comprise a wavelength path and the high order path may comprise a wavelength group path (e.g., see col. 9, lines 59-63 regarding wavelength may be utilized; also, see col. 12, lines 55-59 regarding any combination of media comprising optical, wire, or wireless may be utilized).

Regarding claim 6, Eberle teaches the low order path may comprise a wavelength path (e.g., see col. 9, lines 59-63 regarding wavelength) and the high order path may comprise an optical path (e.g., see col. 9, lines 57-59 regarding optical path).

Regarding claim 7, Eberle teaches the low order path may comprise a wavelength group (e.g., see col. 9, lines 59-63 regarding wavelength) and the high order path may comprise an optical fiber path (e.g., see col. 9, lines 57-59 regarding optical path).

Regarding claim 8, Eberle teaches a path setting method in a communication network including: a node (e.g., at quick channel switch 460, see FIG. 4) having a switch (e.g., switch 460) for switching a path having a predetermined bandwidth referred to as a low order path (e.g., low latency/quick channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex

Art Unit: 2665

bandwidth of 0.66 Gbps and aggregate bandwidth of 10.56 Gbps); a node (e.g., at bulk channel switch 450) having a switch (e.g., bulk switch scheduler 440) for switching the low order path (e.g., at “output select signals”, see col. 9, line 5 – col. 11, line 53), a switch (e.g., switch 450) for switching a path having a bandwidth larger than the predetermined bandwidth referred to as a high order path (e.g., bulk channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 2.5 Gbps and aggregate bandwidth of 40 Gbps), multiplexing means (e.g., via multiplexer, see col. 10, lines 56-60) of multiplexing N, wherein N is an integer of two or more, low order paths (e.g., request/output select signals; see col. 9, lines 34-38) on the high order path (e.g., bulk channel), and separating means (e.g., via output selector, see FIG. 4) of separating the high order path (e.g., bulk channel) into N low order paths (e.g., grant/output select signals; see col. 10, lines 4-8); and a plurality of link groups connecting nodes (e.g., links coupling nodes 420 and 430, see FIG. 4), wherein: in the case where N low order paths (e.g., links at quick channel switch 460) having a route partly coinciding with a section connecting two high order paths exist (e.g., links at bulk channel switch 450), the high order path (e.g., link at bulk channel switch 450) on which the N of the low order paths are multiplexed is set in the section (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53).

Regarding claim 9, Eberle teaches a path setting method in a communication network including: a first node (e.g., at quick channel switch 460, see FIG. 4) having a switch (e.g., switch 460) for switching a path having a predetermined bandwidth referred to as a low order path (e.g., low latency/quick channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 0.66 Gbps and aggregate bandwidth of 10.56 Gbps); a second node (e.g., at bulk channel switch 450) having a switch (e.g., bulk switch scheduler 440) for switching

Art Unit: 2665

the low order path (e.g., at “output select signals”, see col. 9, line 5 – col. 11, line 53), a switch (e.g., switch 450) for switching a path having a bandwidth larger than the predetermined bandwidth referred to as a high order path (e.g., bulk channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 2.5 Gbps and aggregate bandwidth of 40 Gbps), multiplexing means (e.g., via multiplexer, see col. 10, lines 56-60) of multiplexing N, wherein N is an integer of two or more, of low order paths (e.g., request/output select signals; see col. 9, lines 34-38) on the high order path (e.g., bulk channel), and separating means (e.g., via output selector, see FIG. 4) of separating the high order path (e.g., bulk channel) into N low order paths (e.g., grant/output select signals; see col. 10, lines 4-8); and a plurality of link groups connecting nodes (e.g., links coupling nodes 420 and 430, see FIG. 4), wherein: on a route of a first low order path having any two of the first node or the second node as its starting point node and endpoint node (e.g., links at quick channel switch 460), attention is paid to a section that is the second to Nth low order paths (e.g., links at quick channel switch 460) of which route partly coincides with the section exist, the high order path (e.g., links at bulk channel switch 450) on which the first Nth to low order paths are multiplexed is set in the section (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53).

Regarding claim 12, Eberle teaches a node apparatus in a communication network including: a switch (e.g., quick channel switch 460, see FIG. 4) for switching a path having a predetermined bandwidth referred to as a low order path (e.g., low latency/quick channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 0.66 Gbps and aggregate bandwidth of 10.56 Gbps); a switch (e.g., bulk channel switch 450) for switching a path having a bandwidth larger than the predetermined bandwidth referred to as a high order path

Art Unit: 2665

(e.g., bulk channel, see col. 4, lines 33-55 and col. 9, lines 39-47 regarding full-duplex bandwidth of 2.5 Gbps and aggregate bandwidth of 40 Gbps); multiplexing means (e.g., via multiplexer, see col. 10, lines 56-60) of multiplexing N, wherein N is an integer of two or more, of low order paths (e.g., request/output select signals; see col. 9, lines 34-38) on the high order path (e.g., bulk channel); separating means (e.g., via output selector, see FIG. 4) of separating the high order path (e.g., bulk channel) into N low order paths (e.g., grant/output select signals; see col. 10, lines 4-8); and a node controlling means (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53) having a path table recording route information (e.g., prescheduled targets, see col. 11, lines 25-35) on the low order paths passing a node, and wherein: the low order path and the high order path are set by the node controlling means (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 4, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eberle.

Regarding claim 4, Eberle teaches the communication network discussed above regarding claim 1, and further teaches a control unit (e.g., bulk switch scheduler 440) capable of communication with all nodes and having a path table recording route information (e.g.,

Art Unit: 2665

prescheduled targets, see col. 11, lines 25-35) on all the existing low order paths, and the centralized control unit is set actively by the low order path and the high order path (e.g., via bulk switch scheduler 440, see col. 9, line 5 – col. 11, line 53). Further, while Eberle may not specifically disclose the control unit is included in every node in the network, it is generally considered to be within the ordinary skill in the art to duplicate parts for a multiplied effect. St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7<sup>th</sup> Cir. 1977). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to provide the scheduler 440 within each of the nodes in the system in order to provide increased operability for each node in the system, and since it is generally considered to be within the ordinary skill in the art to duplicate parts for a multiplied effect.

Regarding claims 10 and 11, Eberle teaches the path setting method discussed above regarding claim 9, however, may not specifically disclose specific lengths of paths. However, Eberle further teaches that while each stage in the path setting method may have equal length, “one of ordinary skill in the art appreciates that the length of the stages optionally is variable depending on design requirements” (col. 18, lines 45-48). Thus, Eberle implies that for design requirements such as routes of varied lengths or routes with varied other characteristics, the processing stages may be adjusted to adapt to such differences. Accordingly, one of ordinary skill in the art would recognize that for a system with varied lengths of routes, Eberle would suggest adapting the stages of a path setting method to accommodate the differences in path lengths. Moreover, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant. In re



Art Unit: 2665

Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to adjust the lengths of the paths since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. Further, in order to increase efficiency in such a routing system of varied path lengths, one of ordinary skill in the art would recognize the benefits in efficiency by accommodating the paths in order of path length. For example, accommodating the longest length path first would likely reduce processing steps for subsequent shorter length routes, e.g., a route with one less hop. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to accommodate the routes in Eberle in order of path length since Eberle implies that for design requirements such as routes of varied lengths or routes with varied other characteristics, the processing stages may be adjusted to adapt to such differences, and since in order to increase efficiency in such a routing system of varied path lengths, one of ordinary skill in the art would recognize the benefits of increased efficiency by accommodating the paths in order of path length.

Art Unit: 2665

*Conclusion*


16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Nos. 6,958,995 to Goodman et al. and 6,693,909 to Mo et al. each disclose communication networks with path routing with a plurality of switches operating in accordance with bandwidth requirements.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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3/14/06